

Installation of Professor Michael Jones as the new President of the Royal Society of Western Australia.

His Excellency Major General Michael Jeffery, AC MC
Governor of Western Australia.



Vice-Patron of The Royal Society of Western Australia

Monday 15 July, 1996

Dr Steve Hopper, Outgoing President of the Royal Society of Western Australia
Professor Michael Jones, Incoming President of the Royal Society of Western Australia
Distinguished Guests, Ladies and Gentlemen

It is my pleasure to be here tonight to attend your Annual General Meeting and to install the Incoming President, Professor Michael Jones.

The Royal Society of Western Australia has the very real potential, and indeed I would suggest the responsibility, to play a very important role in Society in influencing the community and governments of the critical importance of science and research, if Australia wishes to remain the 'Lucky Country'.

In recent years, science appeared to be losing its appeal for children, and while many young people were concerned, few seemed to be aware of the role that science played in their daily lives. Many appeared to associate science with pollution and nuclear accidents, like Chernobyl, and saw scientists as underpaid and undervalued.

Thankfully, places like Scitech and the weekend morning children's television show 'Hot Science', which present science as a wonderful, glamorous and exciting subject, and organisations like the Royal Society of Western Australia, a body of distinguished scientists and scholars whose primary objective is to promote learning and research in the natural and social sciences and in the humanities, are doing much to change this image.

The Western Australia Education Department has instigated its own policy to encourage science, while science teachers and engineering associations hold competitions such as the annual 'Tournament of Minds' to encourage and stimulate young students to discover creative solutions to problems.

For example, from February 1995 to last month, a total of 240 State Primary Schools implemented, or were in the process of implementing, the Australian Academy of Science 'Primary Investigations' Program. The success of the program has been due to cooperation and collaboration between the Education Department and the science education community. An external evaluation of the effectiveness of the program indicated that, in general, the program

- raised the status of science in primary schools;
- resulted in a whole school approach to science;
- increased student interest in science; and
- resulted in reluctant teachers teaching science.

Its effectiveness has been recognised nationally as indicated by the following statement from the Australian Academy of Science;

"By 1999, at least 50% of Australian primary schools should have structured, whole-school science programs, with 100% involvement by 2002. One state, Western Australia, is already close to achieving the 1999 target."

A science content course for science teachers has also been established.

At the high school level, a Secondary School Teacher Leaders Program was established last year, to train 14 experienced secondary teachers in science education theory and its applications to classroom best practice. Each of these teachers was supported in testing out the ideas presented, sharing their work with others in the group and staff at their schools, and in initiating programs to suit the needs of their students.

Many of the teachers trained last year are continuing their training this year, and two additional programs have been established. One is for experienced teachers, and the other is for science Heads of Department.

Last year, the number of students awarded grades for year 12 science courses were;

Biology 2476 (14.3% of year 12 students),
Chemistry 4132 (23.87%),
Geology 95 (0.54%),
Human Biology 5070 (29.29%),
Physical Science 532 (3.07%),
Physics (3132 (18.09%)), and
Senior Science 2052 (11.85%).

In a world where the population is expected to reach 10 billion over the next few decades and where people will live to an older age, we are going to need more scientists to tackle problems such as nuclear radiation from damaged power plants, such as at Chernobyl, and leaks from sunken nuclear submarines; agricultural shortages in South East Asia, where China for example will have to annually import 370 million tonnes of grain by the year 2030, and Indonesia which was self-sufficient in rice production from 1984 to 1994 has had to start importing rice again, to make up for shortfalls caused by drought, disease and conversion of rice land to other uses; the salinity problems in the Murray/Darling Basin and our own Wheatbelt; vehicle emissions and pollution worldwide; the Greenhouse effect, marine and air pollution, land degradation, conservation of the natural

environment, retention of biodiversity, protection of forests, over-population, water quality and energy options. There will be substantial opportunities for new environment-friendly technologies, such as waste munchers, water purifiers and solar power.

Western Australia offers wonderful opportunities for research in a range of sciences, from those that support industries like mining and petroleum, through to botanists who can explore one of the richest floras in the world, with the potential to yield new natural medicines.

Australia is so different in its geological origins and history that scientists have a superb opportunity to make new discoveries.

On the home front, we will need to maintain our place in competitive international markets and meet the immediate challenge of being 'APEC-ready' by 2010, when the expected free trade agreement will have maximum impact on Australia's international performance. Australia needs to address many difficult issues in managing the rapid pace of scientific and technological change, as it confronts the forces shaping our long-term economic future.

We can no longer rely on natural resources for Australia's wealth and long-term prosperity in a complex world where technologies that did not exist a few decades ago are playing important roles in our social and economic life. For example, twenty years ago many students could expect to leave school and move into a job in the clerical field while continuing their studies. The advent of electronic mail, fax machines, mobile phones, CD-ROM, the Internet, multi-media and computer networks is seeing the rapid demise of the office boy or girl, thus resulting in fewer jobs for today's school leavers.

While the development, acquisition and application of knowledge through science, technology and innovation can create new sources of wealth and improve the quality of our lives, it also raises some serious social issues. For example, it has been suggested that partly due to technology, of our 757,100 Australians out of work as of last month (74,200 in Western Australia), many may never work again. They simply will not be employable, and nor might their children.

Is this going to be an irreconcilable fact of life, with its serious social consequences for the foreseeable future, or can we through genuine intellectual endeavour meet the technology challenges of a modern society with a corresponding social conscience? It will, I think, be important for the scientist of the future to have a well-developed social conscience.

In all its work, The Royal Society of Western Australia aims to bring together an informed and scholarly approach to scientific and technological questions. Its work aims to improve the links between the science and technology community and the education sector from pre-school to tertiary levels.

The Royal Society of Western Australia contributes to the advancement of science for the good of Western Australia by;

- providing a forum for discussion of scientific and technological issues relevant to the community,
- bridging the communication gap between scientific disciplines, and

- bringing significant scientific and technological issues to the attention of government and other decision makers.

I believe that The Royal Society has the potential to utilise its wealth of talent to influence decision makers toward a more dedicated approach towards science education.

The Royal Society of Western Australia has been very fortunate in having Dr Steve Hopper as President for the past year. Dr Hopper is Director and Chief Executive Officer of Kings Park and Botanic Garden. After 14 years as a research scientist working on the conservation of Western Australian flora, Dr Hopper moved into research administration as officer-in-charge of the Western Australian Wildlife Centre, before his appointment at Kings Park and Botanic Gardens in 1992. He has developed specialist expertise in the fields of rare and endangered plants, urban bushland conservation, and the biology of eucalypts, orchids and kangaroo paws. In 1990, he travelled to the United States of America on a Fullbright Senior Scholar's Award, and served as a Miller Visiting Research Professor at the University of California, Berkeley. At Kings Park and Botanic Gardens, Dr Hopper has led strategic planning and new works aimed at delivering world-class services and facilities within 10 years. As Vice-Patron of The Royal Society of Western Australia, I would like to extend my thanks on behalf of The Society to Dr Hopper for his dedication to The Society, especially in the past year as President.

Professor Michael Jones attended Cambridge University, graduating in Natural Sciences (Biochemistry) followed by a Ph. D. in plant biochemistry. This was followed by postdoctoral research fellowships at the University of Missouri (Plant Pathology), the Australian National University (Developmental Biology) and then back to Cambridge University (Biochemistry). He was then appointed senior scientific officer at the Welsh Plant Breeding Station (1979-1982) and principle Scientific Officer at Rothamsted Experimental Station, United Kingdom (1982-1990). In November 1990, Professor Jones was appointed to Murdoch University and became Head of the Plant Sciences discipline within the School of Biological and Environmental Sciences. In 1994, he was appointed Director of the Western Australia State Agricultural Biotechnology Centre, and from this month Professor Jones has been released from his duties within Plant Science to act as full-time director of the Western Australian State Agricultural Biotechnology Centre. I extend my best wishes to Professor Jones for his term as President. As Vice-Patron of The Royal Society of Western Australia, I very much look forward to furthering my association with The Society and its new president in the coming year.

It is now my very agreeable duty to call upon you, Professor Michael Jones, to be installed as the President of The Royal Society of Western Australia. As the President, you are a member of the Council and you preside over all meetings of The Council and Society. I charge you to carry out diligently and faithfully your responsibilities, and to foster the study of science for the good of the global community. Professor Michael Jones, it gives me great pleasure to formally install you as the President of The Royal Society of Western Australia.